



**PvuI (7)**  
**SgfI (6)**
**MfeI (82)**

1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

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101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**HindIII (245)**
**Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCCGCCCTACCTGAGGCC

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301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**AgeI (552)**
**BspHI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGAGTCTCCTGCTTCTAGGCTGGTGCCTACTGGGAT

601 GACCCACCAAGATCCCCGCTCTGGGGAAACCCGAAGCCATAGGACCTGCGGTGCTACTCTGCTGAGGAATTATCTCACGGCCAGGCTCCTCCACAC

13▶ T H Q D P P S W G K P R S H R T L R C Y S A E E L S H G Q A P P H

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**SfiI (741)**
**MscI (749)**

701 CTGCTAACTCGAAGTGCCAGGTGGGAGCAGGCCCTCCCTGTGGCCCTGGTGGCCAGTTGGAGGCCACGGCCACAGGAGACAGCATGAAGGACCTCTAG

47▶ L L T R S A R W E Q A L P V A L V A S L E A T G H R R Q H E G P L

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**EagI (823)**
**Eco47III (857)**
**NcoI (871)**

801 CTGGAACACAGTGCCCGTGCTGCGCCGAGGAGGTGCTGGAAGCTGACACTCACGAGCGCTCCATCTCACCATGGAGATATCGCATCGACACAGATGA

80▶ A G T Q C P V L R P E E V L E A D T H E R S I S P W R Y R I D T D E

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**NsiI (948)**

901 GAACCGCTACCCACAGAAGCTGGCGGTGGCAGAATGCTTGTGTGCTGGATGCATCAACGCCAAGACAGGCCGTGAGACAGCTGCCCTGAACCTCGGTGCAG

113▶ N R Y P Q K L A V A E C L C R G C I N A K T G R E T A A L N S V Q

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**PstI (1003)**
**BamHI (1069)**

1001 CTGCTGCAGAGCCTGCTGGTACTACGGCAGACCCCTGCTCCCGAGACGGCACGGCGACCCTACACAGGATCCTTCCGCTTCCACACCGAGTTCATCC

147▶ L L Q S L L V L R R Q P C S R D G T A D P T P G S F A F H T E F I

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**MscI (1171)**

**PshAI (1148)**
**NheI (1165)**

1101 GCGTGCCTGTCGGTGCACCTGCGTTCTTCCAGGTCTACACAGTGATGACTTCTGTGCTGGCCCGCTAGCTGGCCAGACATGATAAGATACATTGATGA

180▶ R V P V G C T C V L P R S T Q •

1201 GTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA

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**HpaI (1303)**
**MfeI (1314)**
**EcoRI (1399)**

1301 CAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGG

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1401 AATTCTAAAATACAGCATAGCAAACTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTT

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**SapI (1581)**

1501 GCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGT

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**SspI (1638)**
**SwaI (1652)**

1601 TTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAATGTTTTTTATTAGGCAGA

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1701 ATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGC

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1801 TTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAG

141▶ • N R T Y K L P I L E E I T T K V L K G N M E I L V F C D P A

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**SacI (1913)**
**BstXI (1942)**

1901 CATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGT

110▶ Y D S I L E R C M G C P S V V R I S R D V E D S Y P H R V A V I T

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**StuI (2077)**

2001 GTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAAATGGCAATGGCTTTCAGCACAGACAGTACCCTGCCAATGTAGGCCCAATGTGGACAGCAGAG

77▶ D F D K Q G N S V A S G I A I A E A C V T V R G I Y A E I H V A S

2101 ATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGCTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCA

43▶ I I E G T K T R I A A G V H H K N D E Y L M T I K E T A V E V L E L

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**BbsI (2223)**
**XmnI (2219)**
**AseI (2285)**

2201 GATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAAC

10▶ D Q Q S I N F T K M

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**SacI (2342)**

2301 AGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACAGCCTACCGCCATTTGCGTCAATGG

2401 GGCGGAGTTGTTACGACATTTTGAAAGTCCC GTT GATTT **SpeI (2440)**  
 2501 TCAAACCGCTATCCACGCCCATTTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCC  
 2601 ATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACTTGTACTGATGTACTGCCAA  
 2701 GTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGG

2801 GGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAAC **PstI (2852)** **SdaI (2851)** **PacI (2859)** **BspLU11I (2869)**  
 2901 GAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCG  
 3001 ACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCC

3101 CTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGT  
 3201 TCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATT  
 3301 AGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGA  
 3401 AGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCG

3501 CAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGT **PacI (3599)**

3601 **Swal (3608)** **EagI (3619)** **NotI (3618)** TAATTAACATTTAAATCAGCGGCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCA  
 3701 TCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA